



Appledore Island, Isle of Shoals, Kittery, Maine  
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**Shoals Marine Laboratory  
Marine Mammal Biology (BIOSM 3450/MEFB 535)  
June 5 – June 19 2023**

Course Syllabus and Schedule

**Faculty:** Dr. Nadine Lysiak ([nadine.lysiak@gmail.com](mailto:nadine.lysiak@gmail.com)), Suffolk University

**TA:** Jess Veo ([jessveo@gmail.com](mailto:jessveo@gmail.com))

**Prerequisites:** Completion of first year of college

**Class enrollment limit:** 18

**Credit hours:** 3

**Course Objectives/Goals:**

This course will explore the biology and conservation of the whales and seals, with a particular focus on species of the Gulf of Maine. Lectures will examine many facets of marine mammal science including: taxonomy and species diversity, morphological and physiological adaptations for life in the sea, foraging ecology and behavior, reproductive cycles, bioacoustics, conservation and health, anthropogenic interactions, and management of threatened species. Land and open-water observations of whale and seal behavior will give students hands-on opportunities to study marine mammals in the field. Field and laboratory sessions expand on topics covered in lecture. Students will complete a field study on seal population monitoring and laboratory dissections of a small marine mammal.

**Course Materials:**

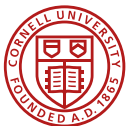
1. Background readings and research literature, will be provided for students electronically.
2. Google Drive:  
<https://drive.google.com/drive/folders/1HeBbpoNqNMPoZAs988R7J3bjgH1ZqVB8?usp=sharing>

**Reference reading for additional information is available at SML Library**

**Classroom:** Hamilton, downstairs

**Laboratory:** Palmer-Kinney (P/K) South

**Housing:** Dorm 2



**Cornell University**



**University of  
New Hampshire**

## Assignments & Grading:

Three quizzes will be given during the course. The schedule (next page) lists what content will be on each quiz. Field and lab activities will periodically be assigned for credit. Students will also complete an independent synthesis activity that will be graded as a final project.

Quizzes	30%
Field & Lab Projects	30%
Final Project	20%
Participation/Community	20%

*Participation:* Success at Shoals requires a positive attitude and a willingness to accept changes in the schedule with grace. Island living demands respect for your fellow classmates, and residents on Appledore. Students are expected to actively participate in all facets of this course, and to display good citizenship while at Shoals. 20% of your grade will be based on the faculty's subjective evaluation of your personal involvement in course activities. If you have any questions or comments about the course, please contact the instructors directly.

## Activity List:

### Expectations and Conduct:

Students are responsible for fully understanding all of the information presented in this syllabus. If there are any questions regarding this information, it is the student's responsibility to bring it to the instructor's attention. In addition, students are responsible for attending all activities associated with this course and completing all assignments. Students are responsible for asking questions anytime they need clarification (remember, there is no such thing as a bad question).

Every student is responsible for their own behavior- specifically in being respectful and collegial to other students and with instructors. Students are responsible for fully understanding and adhering all of the information presented in the SML Appledore Handbook ([http://www.sml.cornell.edu/sml\\_forms.html](http://www.sml.cornell.edu/sml_forms.html))

1. *Personal Technology.* Do not use cell phones or similar devices in the classroom or during course activities and meals. If you take notes with your computer or tablet, disable wireless access during lecture.
2. *Computer Facilities.* Printers are available, but please limit printing to your FINAL document (if required).
3. *Transmission of Course Materials.* Students are not authorized to replicate, reproduce, copy or transmit lectures and course materials presented, or derivative materials including class notes, for sale or free distribution to others without written consent of the instructors who are the original source of the materials.
4. *Academic Integrity.* Any work submitted must be your own. Uncredited use of another person's words, data or images is considered plagiarism, a serious violation of the Code, whether the material comes from another student, a web site, or a published paper. Students must adhere to Cornell's and UNH's Policy for Academic Honesty/Plagiarism and Discrimination
  - i. Cornell: <http://cuinfo.cornell.edu/aic.cfm>
  - ii. UNH: <http://www.unh.edu/vpsas/handbook/welcome-university-new-hampshire>
5. *Disabilities & ADA Accommodation:* Students with a disability must contact Cornell's (420 CCC building; 607-254-4545) or UNH's Student Disability Services(<http://www.unh.edu/disabilityservices>) four weeks prior to start of class for confidential discussion of needs and for registration to verify eligibility for academic accommodations. No retroactive accommodations can be made.
6. *Mental Health:* Shoals Marine Laboratory cares about you and your well-being. If you experience unusual personal or academic stress during the course or need to talk with someone about a personal problem, seek support from your instructors as soon as possible. In addition, any SML staff is available for consultation 24/7. Find staff in the office in the Hamilton House between 8am – 7pm or knock on the door of Bartell House after hours

**Schedule:** Tentative, WILL change due to weather and tides. Check whiteboard in Kiggins Common for updated schedule postings.

Meals (Mon-Sat): Breakfast: 7:30 Lunch: 12:30 Dinner: 18:00  
 Meals (Sunday): Brunch: 10:00 Dinner: 17:00  
 Abbreviations: Lec: Lecture Lab: Laboratory F: Field GL: Guest Lecture A/V: Video/Film

Date	Low Tide	Time	
Mon June 5	18:36		<b>ARRIVAL DAY (~16:15)</b>
		Afternoon	Introduction to SML, Fire & Water
			F: Campus Tour, unpack and get settled
		Evening	Course Introductions
Tue June 6	07:20 19:27	Morning	F: Intertidal Exploration @ 8:30
			A/V: Isles of Shoals History
			F: Island Walk @ 11:00
		Afternoon	Lec: MarMam Characteristics, History, Evolution
			Lec/Lab: Species Diversity & Phylogeny
		Evening	ROCK TALK (@ 20:00): Kristina Cammen - Umaine, virtual
Wed June 7	08:12 20:21	Morning	Lec: Physical & Oceanographic GoM
			Lec: Drag & Locomotion; Anatomy & Physiology I - Bones
			Lab: Skulls & Skeletons
		Afternoon	High Tide Snorkel @13:30
		16:00	<i>FOOD RUN</i>
		Evening:	<i>A/V: Life of Whales</i>
Thur June 8	09:06 21:19	Morning	Lec: Anatomy & Physiology II - Guts
			Lec: Anatomy & Physiology III - Diving
		Afternoon	Blue Ocean Visits, beach clean-up
			Lec: Foraging Ecology & Behavior
		Evening	<i>A/V: Inside Nature's Giants - Sperm Whale</i>
Fri June 9	10:03 22:22	Morning	Lec: Seal Population Biology, Survey Methods (JV)
			<b>F: R/V Heiser Duck Island Seal Survey (@9:30)</b>
			Lab: Duck Island Population Census
		Afternoon	
			Joint Lecture: Whales & Parasites
		Evening	Sunset art project - Scrimshaw
Sat June 10		Morning	<b>Quiz #1: Diversity, Distribution, Anatomy &amp; Physiology</b>

	11:02 23:28		Whale Watch 10-3 (on dock @ 9:45)
		Afternoon	
			Lab: Fluke ID
		Evening	Career Panel w Faculty and Staff of SML (19:00)
Sun June 11	00:00 12:00	Pre-Brunch	Dorm clean up
		Post-Brunch	Seal Necropsy
			Swimming
		Evening	R by the Sea Symposium (Kiggins @ 19:00)
Mon June 12	00:34 13:00	Morning	Lec: Nervous & Sensory Systems
			Lec: Sound Reception & Production
			Lab: Passive Acoustic Monitoring
		Afternoon	<b>F: R/V Heiser Duck Island Seal Survey @ 13:30</b>
			Project Time
		Evening	Video Night: <i>Sonic Sea</i>
Tues June 13	01:41 13:58	Morning	<b>F: Plankton tow @ 08:30 AM</b>
			Lab: Process plankton tow
		Afternoon	Lec: Reproductive Biology & Behavior
			A/V: <i>Sex in the Wild - Dolphins</i>
			Project Time
		Evening	ROCK TALK: Gabriela Bradt - UNH
Wed June 14	02:44 14:54	Morning	<b>Quiz #2: Diving, Sensory Systems, Foraging</b>
			Lec: Human Interactions & Management - Laws
			Lec: Marine Mammal Health, Keystones
		Afternoon	Lec/Discussion: Climate Change
			<b>F: R/V Heiser Duck Island Seal Survey @ 14:45</b>
		16:00	<b>FOOD RUN</b>
		Evening	Video Night: <i>The Last Right Whales</i>
Thur June 15	03:40 15:46	Morning	Lec: Stranding Science & Response
			F: Group Hike
		Afternoon	Project Time

		Evening	Evening Cruise around Islands on <i>Kingsbury</i>
Fri June 16	04:31 16:34	Morning	<b>Quiz #3: Reproduction, Human Interactions, Strandings</b>
			Project Time
		Afternoon	
		Evening	Project Time
Sat June 17	05:19 17:20	Morning	Project Time, practice presentations
		Afternoon	Project Time
		Evening	Marine Mammal Symposium @ 19:15
Sun June 18	06:04 18:03	Pre-Brunch	Island & Classroom Cleanup, Island Store is open
			Group Discussion
		Post- Brunch	F: Group Hike
			Paper due @18:00, MI Symposium @ 18:00
		Evening	program de-brief & bonding time :)
Mon June 19	06:47	Morning	Pack, Final Dorm & Lab Clean up
			<b>DEPARTURE DAY (10:00 AM) JM Kingsbury</b>